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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/695,566 | 10/28/2003 | J. Craig Raese | 10007269-2 | 9175 |

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

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| EXAMINER |
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ORTIZ CRIADO, JORGE L

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| ART UNIT | PAPER NUMBER |
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2655

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|---|--|--|
| Office Action Summary | Application No. 10/695,566 | Applicant(s) RAESE, J. CRAIG | |
| | Examiner Jorge L Ortiz-Criado | Art Unit 2655 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14, 16-18 and 21-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-14, 16-18 and 21-39 is/are rejected.
- 7) ☒ Claim(s) 21-39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Specification

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 14 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. 6,700,853.

Although the conflicting claims are not identical, they are not patentably distinct from each other because removing inherent and/or unnecessary elements or steps would be within the level of one of ordinary skill in the art. Claims are given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims (*In re Yamamoto*, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984); *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997)). One of ordinary skill in the art would recognize to be obvious that the "storage areas" would drawn as "data cluster areas", which are storage areas and

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provides the separation area located therebetween which would perform the same function as the cluster separation area.

3. Claim 21-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 6, 3, 7, 4, 8 respectively of U.S. Patent No. 6,700,853.

Although the conflicting claims are not identical, they are not patentably distinct from each other because removing inherent and/or unnecessary elements or steps would be within the level of one of ordinary skill in the art. The “storage areas being configurable in a plurality of structural states to represent information, is an obvious expedient if the elements or steps perform the same function as before, each of the storage areas being configurable in one of a plurality of structural states to represent information.

4. Claims 31-39 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 6, 3, 7, 4, 8 respectively of U.S. Patent No. 6,700,853.

Although the conflicting claims are not identical, they are not patentably distinct from each other because elements or steps added would be within the level of one of ordinary skill in the art. One of ordinary skill in the art would recognize obvious to include the storage device to a computer, which inherently comprises a processor, which provides the processing of the data stored in the data storage device by communication.

Specification

5. The disclosure is objected to because of the following informalities:

In page 4, lines 12-13 the correct U.S. Patent Application Number and the filing date should be provided.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 9-13,14,16-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gibson et al. U.S. Patent No. 5,557,596.

Regarding claim 9, Gibson et al. discloses a data storage device comprising:

a first wafer having a storage medium, said storage medium having data clusters (See col. 2, lines 1-9; col. 2, line 65 to col. 3, line1; Fig. 1A,1B,1C-106),

each of said data clusters having storage areas associated therewith (See col. 2, lines 1-9; col. 2, line 65 to col. 3, line1; col. 4, lines 3-15; Fig. 1A,1B,1C-106),

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each of said storage areas being configurable in one of a plurality of structural states to represent information stored in said storage area (See col. 3, lines 10-20);

a second wafer fixed in position relative to said first wafer, said second wafer having electron beam emitters configured to electrically communicate with said storage medium (See col. 2, lines 1-9; lines 31-33; col. 2, line 65 to col. 3, line 5; Fig. 1A),

said storage medium and said electron beam emitters being configured to move relative to each other such that at least one of said electron beam emitters is capable of providing a beam of electrons to storage areas of a first data cluster for configuring each of said storage areas in one of said structural states (See col. 2, lines 1-9, lines 26-30; col. 2, line 65 to col. 3, line 5; col. 3, lines 30-36; col. 4, lines 44-46; Fig. 1A); and

means for preventing said at least one of said electron beam emitters from attempting to write data to one of said data clusters other than said first data cluster (See col. 3, line 33-36; col. 4, lines 6-21).

Regarding claim 10, Gibson et al. discloses wherein said means for preventing comprises: means for preventing said at least one of said electron beam emitters from aligning with one of said data clusters other than said first data cluster (See col. 4, lines 15-21).

Regarding claim 11, Gibson et al. discloses wherein said means for preventing comprises: means for accommodating a manufacturing tolerance associated with fixing the position of said first wafer and said second wafer (See col. 2, lines 1-9).

Regarding claim 12, Gibson et al. discloses wherein said means for preventing comprises: means for enabling signals associated with a storage area to be propagated through an area provided between adjacent ones of said data clusters (See col. 4, lines 15-21).

Regarding claim 13, Gibson et al. discloses means for propagating signals from said storage areas (See col. 5, lines 23-27; Fig. 2,3).

Regarding claim 14, Gibson et al. discloses a method for storing data, said method comprising:

providing a data storage device having a first wafer and a second wafer, the first wafer having a storage medium, the storage medium having storage areas associated therewith (See col. 2, lines 1-9; col. 2, line 65 to col. 3, line 1; col. 4, lines 3-15; Fig. 1A,1B,1C-ref# 106, 108),

each of the storage areas being configurable in one of a plurality of structural states to represent information stored in the storage area (See col. 3, lines 10-20),

the second wafer being fixed in position relative to the first wafer, the second wafer having electron beam emitters configured to electrically communicate with the storage medium (See col. 2, lines 1-9; lines 31-33; col. 2, line 65 to col. 3, line 5; Fig. 1A),

the storage medium and the electron beam emitters being configured to move relative to each other such that at least one of the electron beam emitters is capable of providing a beam of electrons to a first storage area for configuring the storage area in one of the structural states (See col. 2, lines 1-9, lines 26-30; col. 2, line 65 to col. 3, line 5; col. 3, lines 30-36; col. 4, lines 44-46; Fig. 1A); and

preventing the at least one of the electron beam emitters from writing data to a second storage area, (See col. 3, line 33-36; col. 4, lines 6-21),

the first storage area and the second storage area having a separation area located therebetween (See col. 2, lines 1-19; col. 4, lines 3- Fig. 1B, ref# 108, 140, 142)

Regarding claim 16, Gibson et al. discloses wherein the step of preventing comprises the step of: accommodating a manufacturing tolerance associated with fixing the position of the first wafer and the second wafer (See col. 2, lines 1-9).

Regarding claim 17, Gibson et al. discloses wherein the step of preventing comprises the steps of: providing a contact area between the first data cluster and adjacent ones of the data clusters; and enabling signals associated with the storage area to be propagated through the contact area (See col. 4, lines 17-21; Fig. 1B);

Regarding claim, 18, Gibson et al. discloses wherein the first data cluster has a contact associated therewith, the contact being configured to enable reading of data from a storage area of the first data cluster, and further comprising the step of: preventing the at least one of the electron beam emitters associated with the first data cluster from attempting to write data to a location of the first data cluster associated with the contact (See col. 4, lines 3-21; Fig. 1B).

Regarding claim 20, Gibson et al. discloses further comprising the step of: calibrating the at least one of the emitters such that the at least one of the emitters does not attempt to write data within the contact area (See col. 3, lines 30-36; col. 4, lines 3-21; Fig. 1A,1B).

Allowable Subject Matter

7. Claims 21-39 would be allowable if rewritten or amended to overcome the rejection(s) under nonstatutory double patenting, set forth in this Office action.

8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art teaches a data storage device comprising a first wafer having a storage medium, said storage medium having data clusters, each of said data clusters having storage areas associated therewith, each of said storage areas being configurable in a plurality of structural states to represent information stored in said storage area;

a second wafer fixed in position relative to said first wafer, said second wafer having electron beam emitters configured to electrically communicate with said storage medium, said storage medium and said electron beam emitters being configured to move relative to each other such that at least one of said electron beam emitters is capable of providing a beam of electrons to storage areas of a first data cluster for configuring each of said storage areas of said first data cluster in said structural states.

Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest either alone or in combination specifically **a first cluster separation area defined about said first data cluster and forming a separation between said first data cluster and adjacent ones of said data clusters** such that said at least one of said electron beam emitters is prevented from writing data to one of said data clusters other than said first data cluster.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DAVID L. OMETZ
PRIMARY EXAMINER